IN THE CLAIMS:

Please cancel claims 1-146 , without prejudice and substitute therefore:

147. (New) Crystalline atorvastatin hemi-calcium and solvates thereof characterized by a physical or spectroscopic analysis result selected from the group consisting of:

a) a powder X-ray diffraction pattern generated using CuK_α radiation with peaks at 4.8, 5.2, 8.0, 9.2, 9.6, 19.0, 20.0, 24.0 and 29.0±0.2 degrees two-theta;

b) a powder X-ray diffraction pattern generated using CuK_α radiation with peaks at 9.3, 9.6, 19.2, 20.0, 21.6, 22.4 and 23.9±0.2 degrees two-theta;

c) *d*-spacings of about 30.81, 18.46, 16.96, 15.39, 14.90, 12.78, 11.05, 9.58, 9.22, 7.42, 6.15, 5.43, 4.62, 4.44, and 3.98Å;

d) a monoclinic unit cell with cell parameters: a=18.55-18.7 Å, b=5.52-5.53 Å, c=31.0-31.2 Å and β=97.5-99.5

e) a solid state cross-polarization/magic angle spinning ^{13}C nuclear magnetic resonance spectrum with resonances at 24.8, 25.2, 26.1, 119.5, 120.1, 121.8, 122.8, 126.6, 128.8, 129.2, 134.2, 135.1, 137.0, 138.3 and 139.8±0.1 parts per million; and

f) a solid state cross-polarization/magic angle spinning ^{13}C nuclear magnetic resonance spectrum wherein the chemical shift differences between the lowest resonance and other resonances are: 2.2, 7.0, 7.4, 8.3, 22.5, 23.0, 23.7, 25.6, 26.3, 28.3, 53.0, 55.5, 96.3, 98.2, 101.7, 102.3, 104.0, 105.0, 108.8, 111.0, 111.4, 116.4, 117.3, 119.2, 120.5, 122.0, 142.0, 148.6, 161.0 and 168.7 parts per million.

148. (New) The crystalline atorvastatin hemi-calcium and solvates thereof of claim 147 wherein the result is the powder X-ray diffraction pattern with peaks at 4.8, 5.2, 8.0, 9.2, 9.6, 19.0, 20.0, 24.0 and 29.0±0.2 degrees two-theta.

149. (New) The crystalline atorvastatin hemi-calcium and solvates thereof of claim 148 wherein the powder X-ray diffraction pattern has peaks at 11.9, 17.3, 21.5 and 22.3±0.2 degrees two-theta.

150. (New) The crystalline atorvastatin hemi-calcium and solvates thereof of claim 149 characterized by a powder X-ray diffraction pattern generated using CuK_{α} radiation substantially as depicted in FIG 3.

151. (New) The crystalline atorvastatin hemi-calcium and solvates thereof of claim 147 wherein the result is the powder X-ray diffraction pattern with peaks at 9.3, 9.6, 19.2, 20.0, 21.6, 22.4 and 23.9±0.2 degrees two-theta.

152. (New) The crystalline atorvastatin hemi-calcium and solvates thereof of claim 148 characterized by a powder X-ray diffraction pattern generated using CuK_{α} radiation substantially as depicted in FIG 3.

153. (New) The crystalline atorvastatin hemi-calcium and solvates thereof of claim 151 wherein the powder X-ray diffraction pattern further has a peak at 16.3 degrees two-theta.

154. (New) The crystalline atorvastatin hemi-calcium and solvates thereof of claim 151 wherein the powder X-ray diffraction pattern further includes peaks at 17.1 (broad), 24.7, 25.6, 26.5±0.2 degrees two-theta.

155. (New) The crystalline atorvastatin hemi-calcium and solvates thereof of claim 147 wherein the result is the *d*-spacings and the crystalline atorvastatin hemi-calcium and solvates thereof is further characterized by a high resolution powder X-ray diffraction pattern substantially as shown in FIG 4 when irradiated with X-rays with a wavelength of about 1.15Å.

156. (New) The crystalline atorvastatin hemi-calcium and solvates thereof of claim 147 wherein the result is a solid state cross-polarization/magic angle spinning ^{13}C nuclear magnetic resonance spectrum with resonances at 24.8, 25.2, 26.1, 119.5, 120.1, 121.8, 122.8, 126.6, 128.8, 129.2, 134.2, 135.1, 137.0, 138.3 and 139.8±0.1 parts per million and the spectrum further includes resonances at 17.8, 20.0, 40.3, 40.8, 41.5, 43.4, 44.1, 46.1, 70.8, 73.3, 114.1, 116.0, 159.8, 166.4, 178.8 and 186.5±0.1 parts per million.

157. (New) The crystalline atorvastatin hemi-calcium and solvates thereof of claim 147 wherein the result is a solid state cross-polarization/magic angle spinning ^{13}C nuclear magnetic resonance spectrum with resonances at 24.8, 25.2, 26.1, 119.5, 120.1, 121.8, 122.8, 126.6, 128.8, 129.2, 134.2, 135.1, 137.0, 138.3 and 139.8±0.1 parts per million and the spectrum is substantially as depicted in FIG 5.

158. (New) The crystalline atorvastatin hemi-calcium and solvates thereof of claim 147 having a water content of up to 7%.

159. (New) The crystalline atorvastatin hemi-calcium and solvates thereof of claim 147 that is a trihydrate.

160. (New) The crystalline atorvastatin hemi-calcium and solvates thereof of claim 147 containing up to about four moles of water.

161. The crystalline atorvastatin hemi-calcium and solvates thereof of claim 147 containing up to about 3% ethanol.

162. (New) The crystalline atorvastatin hemi-calcium and solvates thereof of claim 147 having a narrow particle size distribution.

163. (New) The crystalline atorvastatin hemi-calcium and solvates thereof of claim 162 wherein all of the particles are 100 microns or less in diameter.

164. (New) The crystalline atorvastatin hemi-calcium and solvates thereof of claim 163 wherein all of the particles are 50 microns or less in diameter.

165. Crystalline atorvastatin hemi-calcium Form VIII ethanolate.

166. The crystalline atorvastatin hemi-calcium ethanolate of claim 165 containing up to about 3 % ethanol.

167. (New) A process for preparing the crystalline atorvastatin hemi-calcium and solvates thereof of claim 147 comprising the steps of:

a) suspending any other crystalline or amorphous form of atorvastatin hemi-calcium in a diluent selected from the group consisting of lower alcohols and mixtures of lower alcohols and water for a period of time sufficient to cause substantial conversion to the crystalline atorvastatin hemi-calcium of claim 147 or solvate thereof, and

b) separating the diluent.

168. (New) The process of claim 167 wherein the temperature of the suspension is elevated.

169. (New) The process of claim 167 wherein the diluent is ethanol or a mixture of ethanol and water.

170. (New) The process of claim 169 wherein the diluent is ethanol or a mixture of ethanol and less than about 0.5% water.

171. (New) The process of claim 170 wherein the diluent is ethanol or a mixture of ethanol and less than about 0.2% water.

172. (New) The process of claim 169 further comprising adding methanol to the suspension.

173. (New) The process of claim 169 wherein the other crystalline or amorphous form of atorvastatin hemi-calcium is selected from the group consisting of Forms I, V and XII.

174. (New) The process of claim 169 wherein the diluent is a mixture of ethanol and water.

175. (New) The process of claim 174 wherein the mixture is a mixture of at least about 19 volumes of ethanol to about 1 volume of water.

176. (New) The process of claim 175 wherein the other crystalline or amorphous form of atorvastatin hemi-calcium is Form V.

177. (New) The process of claim 174 wherein the crystalline atorvastatin hemi-calcium and solvates thereof has less than 0.1% contamination by desfluoroatorvastatin hemi-calcium.

178. (New) The process of claim 177 wherein the crystalline atorvastatin hemi-calcium and solvates thereof has less than 0.07% contamination by desfluoroatorvastatin hemi-calcium.

179. (New) The process of claim 174 wherein the crystalline atorvastatin hemi-calcium and solvates thereof has less than 1% contamination with *trans* atorvastatin hemi-calcium.

180. (New) The process of claim 179 wherein the crystalline atorvastatin hemi-calcium and solvates thereof has less than 0.6% contamination with *trans* atorvastatin hemi-calcium.

181. (New) The process of claim 174 wherein the mixture is a mixture of ethanol and water in a volume ratio of about 5:1.

182. (New) The process of claim 167 wherein the diluent is selected from the group consisting of 1-butanol and mixtures of 1-butanol and water.

183. (New) The process of claim 182 wherein the diluent is a 1:4 1-butanol:water mixture.

184. The process of claim 167 further comprising the preliminary step of converting atorvastatin into the atorvastatin hemi-calcium by contacting the atorvastatin with a source of calcium ion.

185. (New) A pharmaceutical composition comprising the crystalline atorvastatin hemi-calcium and solvates thereof of claim 147 and at least one pharmaceutical excipient.

186. (New) A pharmaceutical dosage form comprising the crystalline atorvastatin hemi-calcium and solvates thereof of claim 147 and at least one pharmaceutical excipient.

187. (New) Use of the crystalline atorvastatin hemi-calcium and solvates thereof of claim 147 to prepare a pharmaceutical composition or dosage form.

188. (New) A method of reducing low density lipoprotein particle concentration in the blood stream of a patient by administering the crystalline atorvastatin hemi-calcium or solvate thereof of claim 147.